CLAIMS

We Claim:

1. A method for querying any of a plurality of target databases for one or more target database records that match an input data query, said method comprising the steps of:

querying a reference database for a reference database record that matches the input data, and

if a matching reference database record is found, querying any of the plurality of target databases for the one or more target database records that correspond to the reference database record.

2. The method of claim 1 further comprising the step of generating a request to enter a new input data query if a reference database record is not found.

3. The method of claim 1 wherein said step of querying a reference database comprises querying the reference database for reference database records that possibly match the input data, the method further comprising the steps of:

if a matching reference database record is not found but one or more possibly matching reference database records are found, determining if a possibly matching record can be considered a near-matching record to the input data, and

if a near-matching record is determined, querying any of the plurality of target databases for the one or more target database records that correspond to the near-matching record.

4. The method of claim 3 further comprising the steps of:

if a matching reference database record is not found and one or more possibly matching reference database records are found but a near-matching record is not determined, generating a selection request to choose from among the one or more possibly matching records a record that corresponds to the input data,

if a possibly matching record corresponds to the input data and is chosen, querying any of the plurality of target databases for the one or more target database records that correspond to the chosen record.

5. The method of claim 1 wherein prior to querying the reference database, the reference database is selected from among a plurality of reference databases based on an input data type.

6. The method of claim 1 wherein the step of querying any of the plurality of target databases further comprises, if a matching reference database record is found, querying for records that possibly correspond to the reference database record.

7. A method for querying one or more target databases for one or more target database records, said method comprising the steps of:

receiving an input data query,

based on an input data type, selecting from among a plurality of reference databases one or more reference databases,

if a single reference database is selected:

querying the single reference database for a reference database record that matches the input data, and

if a matching reference database record is found, using the matching reference database record for subsequent queries of the one or more target databases for the one or more target database records.

8. The method of claim 7 wherein said using step comprises the steps of converting the matching reference database record to a single canonical form and using the canonical form for querying the one or more target databases for the one or more target database records.

9. The of claim 7 wherein said using step comprises the steps of converting the matching reference database record to one or more canonical forms wherein each canonical form corresponds to one of the one or more target databases and using each canonical form for querying its corresponding target database for the one or more target database records.

10. The method of claim 7 wherein said using step comprises the steps of removing information from the matching reference database record and subsequently using any remaining information for the subsequent queries of the one or more target databases for the one or more target database records.

11. The method of claim 7 wherein the matching reference database record comprises additional information beyond the input data query and wherein said using step comprises the steps of:

separating the information of the matching reference database record to create a plurality of forms, and

using the plurality of forms for the subsequent queries of the one or more target databases for the one or more target database records.

12. The method of claim 7 wherein if multiple reference databases are selected:

sequentially querying the multiple reference databases until a reference database record that matches the input data is found, and

if a matching reference database record is found, using the matching reference database record for subsequent queries of one or more target databases for one or more target database records.

13. The method of claim 7 wherein if multiple reference databases are selected:

querying the multiple reference databases in parallel for all reference database records that match the input data, and

if one or more matching reference database records are found:

selecting one of the matching reference database records, and

using the matching reference database record for subsequent queries of one or more target databases for one or more target database records.

14. The method of claim 13 wherein said selecting step is based on whether there is a quorum among the one or more matching reference database records.

15. The method of claim 7 wherein if multiple reference databases are selected:

querying the multiple reference databases for all reference database records that match the input data, and

if one or more matching reference database records are found, using each matching reference database record for subsequent queries of one or more target databases for one or more target database records.

16. A system for querying one or more target databases for one or more target database records, said system comprising:

a set of reference-based mapping rules for matching input data queries to reference database records,

a set of target-based query rules for matching reference database records to target database records, and

a validation and mapping process that given an input data query, uses the set of reference-based mapping rules to match a record in a selected reference database to the given input data, and uses the target-based query rules to match the one or more target database records in the one or more target databases to the matched reference database record or to a canonical form of the matched reference database record.

17. The system of claim 16 further comprising a reference database list specifying relations between input data types and reference databases and wherein the validation and mapping process uses the reference database list to determine the selected reference database.

18. The system of claim 16 further comprising a list of transformation rules for converting reference database records to canonical forms.

19. The system of claim 18 wherein the list of transformation rules are also for converting reference database records to customized canonical forms that correspond to the target databases.